

# Non-Treaty Storage Update

**Rick Pendergrass  
Bonneville Power Administration  
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Photo of Columbia River Gorge by J. Hyde



## *Non-Treaty Storage (NTS)*

- Non-Treaty storage refers to storage in the Columbia River Basin in Canada constructed after Treaty ratification in addition to that required under the Columbia River Treaty
- Operation of such storage is limited by Treaty Article IV(5)
- Canada may not operate storage constructed after the ratification date to reduce the **flood control and power benefits** provided under the agreed Treaty operating plans.
- Mica (5 Maf) and Arrow (0.25 Maf) both contain storage space in addition to that required by the Treaty.
- Absent agreement, US parties, including BPA, have no rights to use non-Treaty storage space in Canada.



## *History of non-Treaty Storage Agreements*

- Between 1977 and 1983 there were 8 short-term agreements to allow use of some non-Treaty space.
- These agreements included use of non-Treaty space in Mica as well as 2 ft. of space at Arrow.
- Companion agreements were negotiated with mid-Columbia participants.
- Construction of new reservoirs in Canada and their initial fill was a hotly contested issue (Seven-mile and Revelstoke). BPA and BC Hydro “agreed to disagree” and resolve issues through a mutually satisfactory agreement – the 1984 Non-Treaty Storage Agreement.



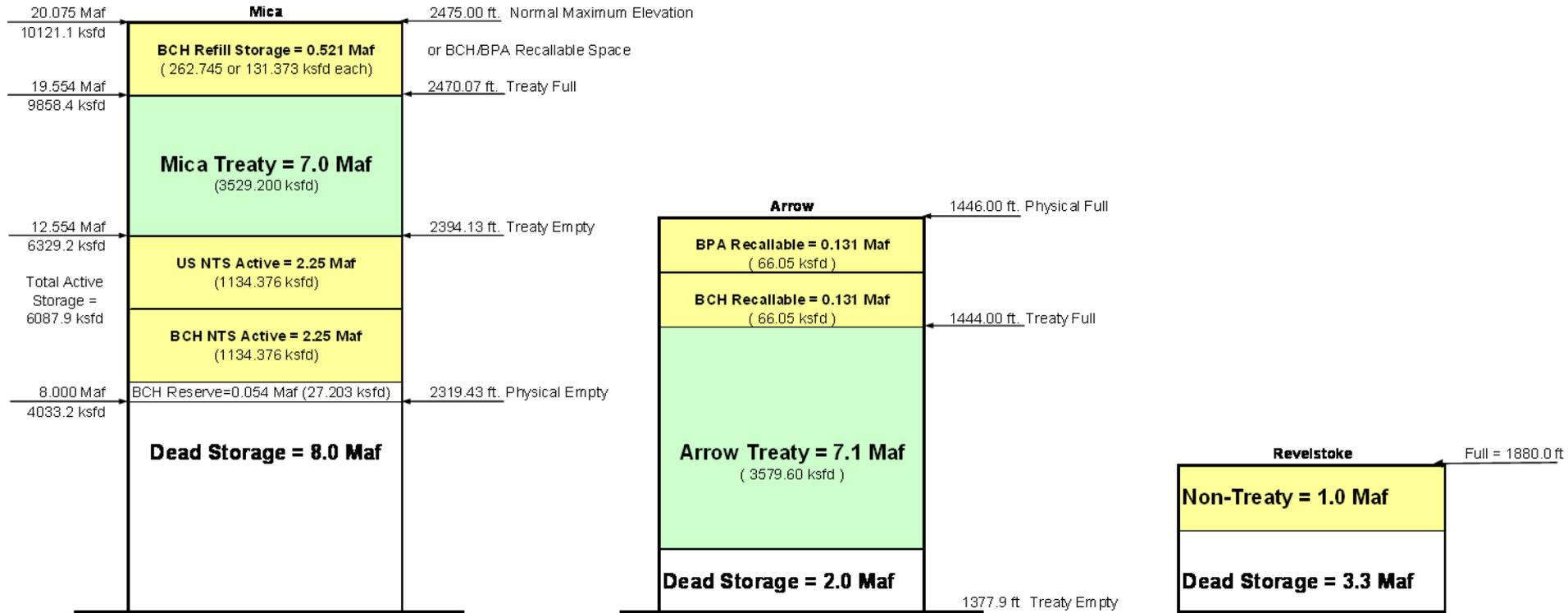
# *1984 and 1990 Non-Treaty Storage Agreements*

## *Active Storage Provisions*

- 1 Maf Storage each for BPA and BC Hydro in 1984
- 2.25 Maf each under the 1990 Agreement
- Storage accounted in Mica
- Either party could decline a transaction by the other party if it can not
  - Provide/accept the energy
  - Accept the flow change at affected projects
- Transactions agreed daily
- Energy deliveries scheduled flat hourly, concurrent with water transactions
- Power benefits of active storage transactions result from 1) reshaping of water releases to increase downstream generation (spill reduction), and 2) shifting generation from lower energy price time periods to higher energy price periods.
- The 1990 NTSA is now complete following refill of accounts in January 2011, ahead of the required refill date of June 2011.

# *Allocation of Treaty and Non-Treaty Reservoir Space under the 1990 NTSA*

*(not to scale)*



Note: NTSA states that Mica Refill Storage = 0.521 Maf & 262.745 ksf/d, so we use 262.745, even though  $0.521 / 1.983471 = 262.671$



# *Non-Treaty Storage and Fisheries*

- Biological Opinions have included an objective for BPA to negotiate an agreement with BC Hydro to use non-Treaty storage space to shape water for fisheries. Typically water has been shaped from high flow periods in the spring into the summer period with lower flows.
- Such agreements provided both power and non-power benefits and were initially negotiated under the umbrella of the 1990 NTSA.
- The agreements allowed BPA and BC Hydro to store water in May/June for release in July/August. BPA would release all of its stored water in the summer, but BC Hydro was only required to release 1/2 of its storage.
- Following expiry of release terms in the 1990 Agreement there was no mechanism for these short-term agreements.
- Negotiation of short-term agreements was difficult following expiration of the 1990 NTSA, the parties did not want to set precedents for a future long-term agreement and no agreement was reached for a couple of years.
- Seasonal agreements have been reached annually since 2006 allowing the Parties to develop both power and non-power benefits.

# *Non-Treaty Storage BiOp Objectives*

- The 2010 NOAA BiOp contains an objective for BPA to utilize non-Treaty storage space in Canada to provide flows for U.S. fisheries through negotiation of a new long-term agreement with BC Hydro.
- If a new long-term agreement is not available, short-term/seasonal agreements to provide the desired flows are to be negotiated.
- Following initial coordination with federal agencies, states, and Tribes, BPA began negotiation of a new long-term non-Treaty agreement with BC Hydro.
- A new long-term agreement will likely be similar to recent short-term agreements and is expected to provide the parties with flexibility to provide power and non-power benefits that could not be achieved otherwise.





# *Potential future long-term NTSA*

- Times have changed and any new NTSA will incorporate those changes:
  - Energy markets have evolved in a way not envisioned at the time the 1990 Agreement was negotiated.
  - Non-power requirements have increased tremendously on both sides of the border.
  - Transmission constraints, particularly on S to N transmission to the US-Canada border, have limited energy deliveries during some time periods.
  - Delivery of the Canadian Entitlement requires use of a significant portion of the available transmission.



# *Potential future long-term NTSA*

- A new long-term NTSA is likely to differ from the 1990 agreement in several important ways
  - The account sizes will be smaller. This is a response to concerns in Canada about non-power impacts of reservoir drafts due to NTS transactions
  - Water and energy transactions may not be concurrent
  - Energy values (based on an index price of energy) will be maintained
  - Transactions will be “netted” to reduce transmission costs
  - Transactions will be scheduled weekly, rather than daily
- A new agreement will likely preserve the ability of either Party to decline a transaction in most cases if the resulting flow change would result in adverse non-power impacts.
- Both Parties desire some limited firm release rights. These will probably be more limited than in the 1990 Agreement.



## *Potential future long-term NTSA*

The goal is to develop a non-Treaty storage agreement that will allow the Parties flexibility to provide power and non-power benefits and to develop terms that will fairly share those benefits.

The target for completion of a new agreement is Fall 2011.